

**WEST****End of Result Set**☐ **Generate Collection**

L1: Entry 1 of 1

File: USPT

Apr 6, 1999

US-PAT-NO: 5893074

DOCUMENT-IDENTIFIER: US 5893074 A

TITLE: Network based task management

DATE-ISSUED: April 6, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hughes; Michael	Camarillo	CA	N/A	N/A
Gira; Glen	Nothridge	CA	N/A	N/A
Wilcox; Reed	Burbank	CA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
California Institute of Technology	Pasadena	CA	N/A	N/A	02	

APPL-NO: 8/ 593260

DATE FILED: January 29, 1996

INT-CL: [6] H04B 10/20, G06F 15/73

US-CL-ISSUED: 705/8; 705/9, 705/11

US-CL-CURRENT: 705/8; 705/11, 705/9

FIELD-OF-SEARCH: 705/8, 705/9, 364/578, 364/468.03

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4875162</u>	October 1989	Ferriter et al.	364/468.3
<input type="checkbox"/> <u>4942527</u>	July 1990	Schumacher	705/9
<input type="checkbox"/> <u>5381332</u>	January 1995	Wood	705/8
<input type="checkbox"/> <u>5490097</u>	February 1996	Swenson et al.	364/578
<input type="checkbox"/> <u>5548506</u>	August 1996	Srinivasan	705/8

ART-UNIT: 273

PRIMARY-EXAMINER: Teska; Kevin J.

ASSISTANT-EXAMINER: Fiul; Dan

ATTY-AGENT-FIRM: Fish &amp; Richardson P.C.

ABSTRACT:

An schedule-control method for managing and controlling projects is described. The method is implemented on components including an electronic user interface, relational database, and computational component. These components are designed to process input data in a well-defined format called a receivable/deliverable (rec/del) format. Using this format, the project is broken down into a series of smaller components or "tasks". Each task involves a contract between a supplier and a receiver, and results in the production of a "product". Suppliers and receivers can enter up-to-the-minute input data in the rec/del format concerning a particular product. Input data are entered through the electronic user interface which can be e-mail or a user-interface computer program. Data are entered into tables of the relational database in the rec/del format. The input data are then rapidly processed with the computational component to generate output data indicating the status of the project.

20 Claims, 10 Drawing figures

# WEST

Generate Collection

Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5406476 A

L1: Entry 1 of 1

File: USPT

Apr 11, 1995

US-PAT-NO: 5406476

DOCUMENT-IDENTIFIER: US 5406476 A

TITLE: Method and apparatus for resource constraint scheduling

DATE-ISSUED: April 11, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Deziel, Jr.; Louis B.	Mountain View	CA	N/A	N/A
Finstad; Liane	Los Gatos	CA	N/A	N/A

## ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Sun Microsystems, Inc.	Mountain View	CA	N/A	N/A	02

APPL-NO: 8/ 126101

DATE FILED: September 23, 1993

## PARENT-CASE:

This is a continuation of application Ser. No. 07/684,036, filed Apr. 11, 1991, now abandoned.

INT-CL: [6] G06F 15/22, G06F 15/24, G06F 15/20, G06F 15/46, G06G 7/48, G06G 7/52, G06G 7/64, G06G 7/66

US-CL-ISSUED: 364/402; 364/401, 364/468

US-CL-CURRENT: 705/8; 700/101

FIELD-OF-SEARCH: 364/401, 364/402

## REF-CITED:

### U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4644479</u>	February 1987	Kemper et al.	364/550
<u>4648023</u>	March 1987	Powell	364/156
<u>5016170</u>	May 1991	Pollalis et al.	364/401
<u>5040116</u>	August 1991	Evans, Jr. et al.	364/424.02

### OTHER PUBLICATIONS

"A Survey of Scheduling Rules," Panwalker et al. Operations Research, vol. 25, No. 1, Jan.-Feb. 1977, pp. 45-60

Time Line in "Maser Plans: Project Management Software," Fersko-Weiss, PC Magazine, vol. 16, Issue N16 (Dialog Acc. No. 05245494).

Fersko-Weiss; "Super Project Expert"; PC Magazine; vol. 9 No. 15; p. 358(2);  
Sep. 11, 1990; Dialog: File 648, Acc#08790584.

ART-UNIT: 231

PRIMARY-EXAMINER: Hayes; Gail O.

ASSISTANT-EXAMINER: Tkacs; Stephen R.

ATTY-AGENT-FIRM: Blakely Sokoloff Taylor & Zafman

**ABSTRACT:**

Constrained resource allocation techniques are implemented with a digital computer due to its improved speed and graphics capability. These techniques allow for rapid resource constrained scheduling when given a precedence ordered list of activities. Resources are allocated to activities in order of highest priority with all precedence constraints being taken into account. Resources are allocated in such a manner that preserves the integrity of the random variables associated with start and finish times of activities. Activity durations and start/finish expected values and variances are adjusted to account for shortfalls occurring prior to an activity's start time and between an activity's start and finish times. The result is a schedule of start and finish times for each activity that is resource feasible and achievable within a prescribed confidence level.

24 Claims, 15 Drawing figures

Full	Title	CT.1	DEV.1	CLS.1	PEF.1	DRAW.1
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Terms	Documents
5406476.pn.	1

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Documents, starting with Document:

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☐ 1. Document ID: US 5787283 A

L3: Entry 1 of 1

File: USPT

Jul 28, 1998

US-PAT-NO: 5787283

DOCUMENT-IDENTIFIER: US 5787283 A

TITLE: Framework for manufacturing logistics decision support

DATE-ISSUED: July 28, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chin; Goodwin R.	Palo Alto	CA	N/A	N/A
Dietrich, Jr.; Walter C.	Yorktown Heights	NY	N/A	N/A
Ervolina; Thomas Robert	Hopewell Junction	NY	N/A	N/A
Fasano; John Peter	Briarcliff Manor	NY	N/A	N/A
Poole; Elizabeth Jodi	Garrison	NY	N/A	N/A
Tang; Jung-Mu	South Salem	NY	N/A	N/A

## ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY	N/A	N/A	02

APPL-NO: 8/ 549591

DATE FILED: October 27, 1995

INT-CL: [6] G06F 17/60

US-CL-ISSUED: 395/701; 395/705, 395/703, 395/919, 395/925, 395/920, 395/54, 395/60, 395/62, 364/468.03, 364/468.05, 364/468.02, 364/468.01, 364/468.06, 364/468.09, 364/468.1, 364/578, 364/921.4, 364/916.3, 705/8, 705/9, 705/7, 705/10, 707/103, 707/104

US-CL-CURRENT: 717/1; 700/100, 700/103, 700/104, 700/95, 700/96, 700/97, 700/99, 705/10, 705/7, 705/8, 705/9, 706/50, 706/53, 706/919, 706/920, 706/925, 707/103, 707/104, 717/3, 717/5

FIELD-OF-SEARCH: 395/701-710, 395/919, 395/920, 395/925, 395/10, 395/12, 395/50, 395/54, 395/60, 395/62, 395/68, 395/75-77, 364/468.01-468.09, 364/468.1, 364/578, 364/282.1, 364/221.2, 364/221.9, 364/280.4, 364/916.3, 364/912.4, 705/7, 705/8, 705/10, 705/1, 707/103, 707/104, 707/100

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5089970</u>	February 1992	Lee et al.	364/468.02
<u>5216593</u>	June 1993	Dietrich et al.	364/468.09
<u>5369570</u>	November 1994	Parad	364/468.05
<u>5450317</u>	September 1995	Lu et al.	705/10
<u>5463555</u>	October 1995	Ward et al.	364/468.02
<u>5479343</u>	December 1995	Matoba et al.	364/468.13
<u>5548518</u>	August 1996	Dietrich et al.	364/486.06
<u>5630070</u>	May 1997	Dietrich et al.	705/8
<u>5649113</u>	July 1997	Zhu et al.	705/7

#### OTHER PUBLICATIONS

"Systems Integration Report: Integrated Plant Floor Management Software Shows Considerable Promise", Manufacturing Automation, p. N/A, May 1993.  
 IBM Production Resource Manager, Release 4 User's Guide and Reference.  
 Optimization Subroutine Library, Guide and Reference.  
 Chesapeake Decision Sciences, Inc. Mimi p. 4.  
 Macsyma.RTM. 2.2.  
 Linpack.  
 Design Patterns.

ART-UNIT: 274

PRIMARY-EXAMINER: Voeltz; Emanuel Todd

ASSISTANT-EXAMINER: Dam; Tuan Q.

ATTY-AGENT-FIRM: Kaufman; Stephen C.

#### ABSTRACT:

A tool including a framework suitable for manufacturing logistics decision support. The tool comprises means for providing an object-oriented technology framework, the framework comprising: means for defining objects representing manufacturing logistics problems; means for transforming a subject of the above objects into representations commonly used in a mathematical solver, wherein the representations in the solver have predefined relationships based on their properties; and, means responsive to selective changes in the objects for modifying the behavior of the framework for developing anew manufacturing logistics decision support application.

7 Claims, 9 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5630070 A

L4: Entry 1 of 1

File: USPT

May 13, 1997

US-PAT-NO: 5630070

DOCUMENT-IDENTIFIER: US 5630070 A

TITLE: Optimization of manufacturing resource planning

DATE-ISSUED: May 13, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dietrich; Brenda L.	Yorktown Heights	NY	N/A	N/A
Wittrock; Robert J.	Ossining	NY	N/A	N/A

## ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY	N/A	N/A	02

APPL-NO: 8/ 108014

DATE FILED: August 16, 1993

INT-CL: [6] G06F 17/60

US-CL-ISSUED: 395/208

US-CL-CURRENT: 705/8

FIELD-OF-SEARCH: 364/401, 364/402, 304/41R, 304/402, 395/207-208, 395/210

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4646238</u>	February 1987	Carlson, Jr. et al.	364/403
<u>4744026</u>	May 1988	Vanderbei	364/402
<u>4744027</u>	May 1988	Bayer et al.	364/402
<u>4885686</u>	December 1989	Vanderbei	364/402
<u>4924386</u>	May 1990	Freedman et al.	364/402
<u>5053970</u>	October 1991	Kurihara et al.	364/468
<u>5093794</u>	March 1992	Howie et al.	364/468
<u>5101352</u>	March 1992	Rembert	364/401
<u>5140537</u>	August 1992	Tullis	364/578
<u>5148370</u>	September 1992	Litt et al.	364/468
<u>5155679</u>	October 1992	Jain et al.	364/402
<u>5172313</u>	December 1992	Schumacher	364/401
<u>5185715</u>	February 1993	Zikan et al.	364/807
<u>5216593</u>	June 1993	Dietrich et al.	364/402

#### FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY
0364090	August 1989	EPX
0517953A2	December 1991	EPX

#### OTHER PUBLICATIONS

"Molp with an Interactive Assessment of a Piecewise Linear Utility Function", Jacquet-Lagrez et al, European Journal of Operational Research, vol. 31, 1987, pp. 350-357.

"A Hybrid Approach to Multi-Objective Linear Optimization", Poh et al., Journal of the Operational Research Society, vol. 41, No. 11, 1990, pp. 1037-1048.

"A Weighted-Gradient Approach to Multi-Objective Linear Programming Problems Using the Analytic Hierarchy Process", Arbel, Mathematical and Computer Modelling, vol. 14, No. 4/5, 1993, pp. 27-39.

"Determination of the Crop Mix of a Rubber and Oil Plantation--A Programming Approach", Tan et al., European Journal of Operational Research, vol. 34, 1988, pp. 362-371.

ART-UNIT: 241

PRIMARY-EXAMINER: Hayes; Gail O.

ASSISTANT-EXAMINER: Kyle; Charles

ATTY-AGENT-FIRM: Perman & Green

#### ABSTRACT:

A method for constrained material requirements planning, optimal resource allocation, and production planning provides for an optimization of a manufacturing process by designating the amounts of various manufactured products to be produced, which products include both end products as well as subassemblies to be employed in the manufacture of one or more of the end products. In order to accomplish the optimization, the method employs an objective function such as the maximization of income in a situation wherein there are limitations on the inventory of raw materials and tools to be employed in the manufacturing process. Data describing elemental steps in the manufacturing process for the production of each end product, as well as the quantity or demand for each end product which is to be supplied, are presented as a set of linear mathematical relationships in matrix form to be inserted in a computer which determines the optimum number of each end product in accordance with an LP optimization algorithm. The matrix contains bill of material data, and various constraints such as a constraint on the sum of products shipped and used as subassemblies, and constraints based on inventory,



on available time for use of resources such as tools, and on inventory left over from an early production run for a later run.

23 Claims, 10 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5897629 A

L2: Entry 1 of 1

File: USPT

Apr 27, 1999

US-PAT-NO: 5897629

DOCUMENT-IDENTIFIER: US 5897629 A

TITLE: Apparatus for solving optimization problems and delivery planning system

DATE-ISSUED: April 27, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinagawa; Akio	Kawasaki	N/A	N/A	JPX
Okada; Hiroyuki	Kawasaki	N/A	N/A	JPX
Nakabayashi; Ayumi	Tokyo	N/A	N/A	JPX
Takada; Kazumi	Tokyo	N/A	N/A	JPX

## ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Fujitsu Limited	Kawasaki	N/A	N/A	JPX	03

APPL-NO: 8/ 775333

DATE FILED: December 31, 1996

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	8-134701	May 29, 1996

INT-CL: [6] G06F 15/18

US-CL-ISSUED: 706/13

US-CL-CURRENT: 706/13

FIELD-OF-SEARCH: 395/13, 706/13

## REF-CITED:

### U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5136686</u>	August 1992	Koza	395/13
<u>5222191</u>	June 1993	Shaefer	395/13
<u>5319781</u>	June 1994	Syswerda	395/650
<u>5343554</u>	August 1994	Koza et al.	395/13
<u>5541848</u>	July 1996	McCormack et al.	395/13
<u>5581657</u>	December 1996	Lyon	395/13

### FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO

PUBN-DATE

COUNTRY

7-219920

August 1995

JPX

7-230443

August 1995

JPX

## OTHER PUBLICATIONS

Uckun et al, "Managing Genetic Search in Job Shop Scheduling", IEEE Expert Magazine, Oct. 1993, vol. 8, issue 5.

Ono et al, "A Genetic Algorithm for Job-Shop Scheduling Problems Using Job-based Order Crossover", IEEE Evolutionary Computation Conference, 1996.

Falkenauer et al, "A Genetic Algorithm for Job Shop", IEEE International Conference on Robotics and Automation, 1991.

Uchimura et al, "Genetic Algorithm for Vehicle Routing Problem in Delivery System", IEEE Vehicle Navigation and Information Systems, 1994.

ART-UNIT: 272

PRIMARY-EXAMINER: Hafiz; Tariq R.

ATTY-AGENT-FIRM: Staas &amp; Halsey

## ABSTRACT:

A problem solver apparatus for solving optimization problems, which finds better solutions at a higher speed by utilizing both genetic algorithms and OR-based techniques. When an optimization problem is given to the problem solver apparatus, a searching strategy optimization unit creates a population of individuals using a genetic algorithm. Each individual has a chromosome to indicate a solution searching strategy. Upon receipt of such a population, a solution searching unit searches for solutions according to the strategies respectively indicated by the chromosomes of the individuals, thus obtaining candidate solutions. This group of candidate solutions is returned to the searching strategy optimization unit. The searching strategy optimization unit calculates fitness values of respective candidate solutions in the received candidate group. The searching strategy optimization unit applies some genetic operators to the individuals, thereby producing a new generation population. The produced new generation population is directed to the solution searching unit to perform another search. The problem solver apparatus repeats the above procedure until the candidate solutions show some acceptable fitness values. Lastly, the fittest candidate solution is chosen as the final solution of the optimization problem.

26 Claims, 19 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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File: USPT

Mar 2, 1999

US-PAT-NO: 5878416

DOCUMENT-IDENTIFIER: US 5878416 A

TITLE: Automated system and method for matching an item of business property to a recipient

DATE-ISSUED: March 2, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harris; Bradly R.	Princeton	TX	N/A	N/A
Cue, II; James B.	Flower Mound	TX	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Electronic Data Systems Corporation	Plano	TX	N/A	N/A		02

APPL-NO: 8/ 664332

DATE FILED: June 14, 1996

INT-CL: [6] G06F 17/30

US-CL-ISSUED: 707/10; 705/28, 705/8, 705/26, 705/29

US-CL-CURRENT: 707/10; 705/26, 705/28, 705/29, 705/8

FIELD-OF-SEARCH: 705/28, 705/29, 705/26, 705/8, 707/10

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4310883</u>	January 1982	Clifton et al.	364/200
<input type="checkbox"/>	<u>4797818</u>	January 1989	Cotter	705/26
<input type="checkbox"/>	<u>4799156</u>	January 1989	Shavit et al.	705/26
<input type="checkbox"/>	<u>5216593</u>	June 1993	Dietrich et al.	705/8
<input type="checkbox"/>	<u>5233533</u>	August 1993	Edstrom et al.	705/8
<input type="checkbox"/>	<u>5237497</u>	August 1993	Sitarski	705/8
<input type="checkbox"/>	<u>5315509</u>	May 1994	Natarajan	705/28
<input type="checkbox"/>	<u>5361199</u>	November 1994	Shoquist et al.	705/26
<input type="checkbox"/>	<u>5432931</u>	July 1995	Woess et al.	707/1
<input type="checkbox"/>	<u>5434775</u>	July 1995	Sims et al.	705/8
<input type="checkbox"/>	<u>5627533</u>	May 1997	Clark	341/51
<input type="checkbox"/>	<u>5636310</u>	June 1997	Wallis	705/28
<input type="checkbox"/>	<u>5638519</u>	June 1997	Haluska	705/28
<input type="checkbox"/>	<u>5664109</u>	September 1997	Johnson et al.	705/2
<input type="checkbox"/>	<u>5712989</u>	January 1998	Johnson et al.	705/28

## OTHER PUBLICATIONS

On Estimating Access Costs in Relational Databases, by Maio, Scalas and Tiberio, Information Processing Letters 19, pp. 157-161, Mar. 22, 1984.

ART-UNIT: 276

PRIMARY-EXAMINER: Amsbury; Wayne

ASSISTANT-EXAMINER: Alam; Shahid

ATTY-AGENT-FIRM: Kennerly; Christopher W. Griebenow; L. Joy

## ABSTRACT:

An automated system (10) for matching an item of business property to a recipient includes an inventory database (32) containing inventory data (34) concerning the item. A match module (30) is coupled to the inventory database (32) and receives allocation data (14) for the item. The match module (30) generates match data (180) for the item and associates the match data (180) with the inventory data (34). The match module (30) receives an item request (33) containing request data (152) and matches the item to the recipient associated with the item request (33) using the match data.

22 Claims, 7 Drawing figures